

EWP77-71W, HELIAX® Premium Elliptical Waveguide, 7.125–8.5 GHz, unjacketed

Product Classification

Brand	HELIAX®
Product Type	Elliptical waveguide

Construction Materials

Jacket Material	Unjacketed
Conductor Material	Corrugated copper

Dimensions

Cable Volume	585.0 L/km 6.3 ft ³ /kft
Cable Weight	0.67 kg/m 0.45 lb/ft
Diameter Over Jacket (E Plane)	43.60 mm 1.72 in
Diameter Over Jacket (H Plane)	25.40 mm 1.00 in

Electrical Specifications

Operating Frequency Band	7.125 – 8.5 GHz
eTE11 Mode Cutoff	4.720 GHz
Group Delay	128 ns/100 ft @ 7.800 GHz 419 ns/100 m @ 7.800 GHz

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)

Mechanical Specifications

Maximum Twist	3.00 %/m 1.00 %/ft
Minimum Bend Radius, Multiple Bends (E Plane)	230.00 mm 9.00 in
Minimum Bend Radius, Multiple Bends (H Plane)	635.00 mm 25.00 in
Minimum Bend Radius, Single Bend (E Plane)	180.00 mm 7.00 in
Minimum Bend Radius, Single Bend (H Plane)	510.00 mm 20.00 in

Note

Performance Note	Values typical, unless otherwise stated
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Standard Conditions

Attenuation, Ambient Temperature	24 °C 75 °F
Average Power, Ambient Temperature	40 °C 104 °F
Average Power, Temperature Rise	42 °C 76 °F

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
7.125–8.5 GHz	1.06	30.70

* VSWR/Return Loss indicated is for lengths up to 300 ft (91.4 m)

* VSWR/Return Loss is guaranteed for factory-fit and typical for field-fit assemblies

* Custom length performance: Call 828-324-2200 or 1-800-982-1708 (toll free), or your local CommScope representative

Attenuation

Frequency (GHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)	Group Velocity %
7.1	1.907	6.258	3.122	74.9
7.3	1.863	6.113	3.196	76.4
7.5	1.825	5.988	3.263	77.8
7.7	1.792	5.88	3.323	79.1
7.9	1.764	5.786	3.377	80.3
8.1	1.739	5.705	3.425	81.4
8.3	1.717	5.634	3.468	82.4

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
China RoHS SJ/T 11364-2014	Below Maximum Concentration Value (MCV)

